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ABSTRACT

This paper argues that (1) as measures of emotional empathy in children are refined, there is increasingly strong support for the hypothesis that emotional empathy can serve both as an inhibitor of antisocial behavior and as a motivator of prosocial behavior, but that (2) since the relation between children's empathy and their behavior is confounded by a number of factors the measures require further refinement. Research is described which investigates the responses of children in grades one, three and five to violent and non-violent events shown in slides and on television. No significant evidence was found that children's assessed level of empathy was related to their aggressive or altruistic behavior toward peers. It is argued that the criterion measures of altruism and aggression are not responsible for this result, but that an aspect of the empathy measure, children's reports of their own affect, is not reliable. When a measure not dependent on children's self-reports was used, the relation between empathy and behavior appeared dependent upon (1) empathic responses to specific affects and the relevance of specific empathic emotions to the criterion behaviors, (2) situational factors in the empathy eliciting and criterion contexts, and (3) the age and sex of the children. It is suggested that both younger and older children are aroused by violent episodes, but that the latter are more likely also to empathize with the victim. A short description of the Feshbach and Roe measure of empathy and five tables of data are appended. (Author/RH)

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Assessing empathy in children: A search for an elusive construct

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In D.B. Sawin (Chair), Empathy in children: Conceptual and methodological issues in current research. Symposium presented at the meetings of the Society for Research in Child Development, San Francisco, 1979.

Assessing empathy in children: A search for an elusive construct

Over the past two years we have been studying emotional empathy in children. By emotional empathy I mean vicarious emotional responses of children to the affect of other persons; where these emotional reactions are similar to the emotion being experienced by the other person. Our research has been directed toward three main goals: 1) to investigate the effects of emotional empathy on children's social behavior; 2) to evaluate the reliability and validity of the most frequently used measure of emotional empathy in children (this measure was developed by Norma Feshbach and her associate Kicki Roe and is described in Figure 1); and 3) to develop and evaluate additional measures of empathy that are reliable and valid for children of different ages and ethnicities.

We started this work with two general hypotheses. Children who are emotionally empathic should be less aggressive because they vicariously experience the suffering of victims of aggression. Such children should also be more cooperative, generous, and sympathetic because these prosocial acts make other children feel good and thus, vicariously, make the empathizing children feel good as well. We have tested these hypotheses in two laboratory studies. In the first, the Feshbach and Roe measure of empathy was used to predict boys' aggression toward peers following exposure to televised violence. In a second study this same measure of empathy was used to predict children's altruistic, donating to less fortunate peers. The findings from these studies are shown in Table 1.

As you can see, we found no significant evidence that children's assessed level of empathy was related to their aggressive behavior, or to their

altruistic behavior toward less fortunate peers.

What was wrong? Perhaps our criterion measures of aggression and altruism were inadequate; perhaps our measure of empathy was not reliable or lacked validity; or perhaps our theory was wrong.

There is good reason to think that the problem was not the criterion measures of altruism and aggression. Laboratory measures of aggression that are the same or similar to ours have been found in past research to provide a reliable index of television violence effects, sex differences, age differences, and most important, peer ratings of aggression. And, our laboratory measure of altruism has been found in other research to be sensitive to mood-induction effects on children's donating behavior and to sex differences in these effects.

Now let's look at the empathy measure. We have used three approaches to evaluate this index of empathy in children:

1) We have sought, and found, other evidence that children experience emotional empathy. In a field study of children's responses to distress in natural play contexts, we found that at least half of the children showed reliably, codeable signs of distress on their own faces in reaction to crying by peers. These data boosted our confidence that many children actually do experience emotional empathy and that we can reliably measure these reactions.

2) Next we evaluated the stimulus materials (slides and narrations) from the Feshbach and Roe (1968) measure of empathy. Interviews with kindergarten and second grade children showed that boys and girls at both age levels had excellent comprehension of the story contents--they accurately identified the story children's affect and the eliciting events. In another study we found that a majority of the children in this age range showed

evidence of empathic arousal in the form of shifts in heart rate, vasoconstriction, or galvanic skin response during these same slide stories. These findings provide support for both the external and internal validity of the slide stories.

3) We next turned to an evaluation of the response measure--children's verbal self-reports of their feelings in response to the affect of the story children. Here is where the problem seems to lie. We started with analyses of the internal consistency of the total empathy scores that are based on these verbal reports of empathy. The results are shown in Table 2. The correlations among the four different affect sub-scores are shown in section (A); correlations between affect sub-scores and total empathy scores are in section (B); and Chronbach Alphas are shown in section (C). None of these indices of internal consistency are very high. They show only moderate convergence among the children's reports of empathy to the four different affects. So, either children's verbal self reports are not reliable, or, empathy in children is not a unitary construct. We explored these issues further.

Based on the evidence for only moderate internal consistency among the components of the total empathy scale, we calculated the correlations between empathy scores and aggression for each empathy subscale separately. The results are in Table 3 Section (A). Notice that all of the significant correlations are in the expected, negative direction. Boy's empathic sensitivity to specific negative affects in peers (i.e., sadness, fear, anger) was associated with lower levels of aggressive behavior toward peers. But note that the more precise nature of this general relation is dependent on age, the specific affect to which the boys reported empathy (e.g., anger vs. fear), and the television exposure condition.

In Table 3 Section (B) you can see that applying the same procedure in the altrism study yielded significant prediction of altruistic behavior from empathy scores for sadness. However, the pattern of correlations only partially supports our predictions of a positive relation between empathy and altruism, and age, again, was a factor in this relation. For first-graders there was a positive correlation between empathy and altruism: empathic sensitivity to sadness in a peer predicted greater sharing of prize marbles with a less fortunate child. But among the third-graders self-reported empathy to the sadness of a peer was negatively correlated with altrusitic behavior and particularly so for the boys.

By breaking down the global measure of empathy into separate sub-scales for the specific component affects, we were beginning to explicate the relation between children's self-reported emotional empathy and their social behavior. Based on these analyses, the relation between empathy and behavior appeared to be dependent upon: 1) empathic responses to specific affects and the relevance of the specific empathic emotions to the criterion behaviors; 2) situational factors in both the empathy eliciting slide stories and the criterion context; and 3) to the age and sex of the children. Careful listening to the children's verbal self-reports of their feelings during the empathy measure suggested to us that the age and sex differences in the relation between empathy and behavior were due, at least in part, to differences in children's facility in describing their emotional reactions to affect in peers.

To test this hypothesis we assessed the reliability of children's verbal self-reports and found that they were poor. Second, we partialed standard

verbal ability scores out of the correlations between empathy and altruism and found major shifts in both the magnitude and the direction of the partial correlations from the regular correlations. Clearly, verbal ability was confounding self-reported empathy.

In the meantime, we were developing measures of empathic affect and empathic arousal that were not dependent on children's self-reports of empathy. For a subset of subjects in the empathy and altruism study, we obtained the experimenters' subjective ratings of affect in the children's faces and voices at the time they responded to the slide stories. In this first attempt, inter-rater agreement was good (.83) and the correlations among the sub-scale scores for the four different affects (i.e., internal consistency) were substantially stronger than those obtained for verbal self-reports. Also relevant was the finding that the correlation between the experimenters' ratings of the children's empathic affect and the children's own verbal self-reports of empathic emotion was only .31.

Most important, you can see from Table 4 that, for first-grade children, the ratings of empathic affect in response to the slide stories were significant predictors of altruism. Furthermore, empathic affect was a stronger predictor of altruism in these younger children than their self-reported empathy scores had been. Finally, the ratings of empathic affect for the older children resulted in no significant correlations with altruism that were incompatible with our predictions, as had been the case for verbally, self-reported empathy scores.

Using a somewhat similar, but more direct strategy in the empathy and aggression study, we video-taped the boys' facial expressions while they watched the televised violence. These tapes were then scored for indications

of negative and positive emotion using a procedure adapted from Izard's Maximally Discriminative Coding System. The correlations between emotion while viewing violence and the boys' post-viewing aggression toward a peer are in Table 5.

First look at the findings for the fifth-graders on the right hand side of the table. Empathic distress was strongly, negatively correlated with post-viewing aggression. Boys at this age who showed facial expressions of pain during the segments of the violent episode where the victims' pain cues were explicitly shown were subsequently less aggressive than boys who did not react to the victims' pain with empathic distress. This finding is consistent with our hypothesis that empathic emotional reactions to distress should serve as an inhibitor of aggression. But for first-graders, empathic distress (i.e., expressions of pain in response to pain stimuli) was not a significant factor in subsequent aggression. Rather, facial expressions of either joy or pain during the high violence segments in which the victims' pain cues were not visible were positively correlated with subsequent aggression toward a peer. These data fit an arousal hypothesis of television violence effects and indicate that either: (1) exposure to victims suffering does not elicit as much empathic distress in younger children; or (2) that empathic distress does not inhibit subsequent aggression in younger children. Other data from our research speak to these issues.

We interviewed children about their perceptions and understanding of emotional events. We found that younger children relied mainly on the most salient situational cues in identifying other children's feelings, and, more importantly, their own emotional reactions to emotional events. Older children focused more on person-cues such as facial expressions and body posture and used these data to infer the internal feeling state of other

children. They then used these expressive cues and their cognitive inferences about the internal feeling states of others to make attributions about the nature and cause of their own emotional reactions to emotional events.

This development of person perception and inferential processes may account for the age differences in the direction of the correlations between emotional arousal and aggression in the television effects study. First, the boys at both age levels were apparently aroused by exposure to violence since there were no age differences in the expressions of emotion on the boys' faces during viewing. The interview data, though, suggest that the older boys were more attentive to the expressions of pain on the victims' faces than the younger boys, and were more likely to use these cues to infer the negative-feeling state of the victim. The older boys then used these perceptual and inferential data to interpret and label their own arousal as distress. This empathic distress then served to inhibit aggressive behavior.

The younger boys, I propose, focused primarily on the more salient high-action violence and less on the pain cues of the victims. They were also less likely than older boys to make inferences about the internal feeling states of the victims; so they experienced arousal without feeling the empathic distress that might have inhibited their aggressive behavior following exposure to the violence. In another study we are exploring these developmental changes in the relations among physiological arousal, facial expressions of emotion, and children's labeling of their emotions that are reactions to affect in peers.

So far, more than half of the children are showing signs of physiological arousal (shifts in heart rate, vasoconstriction, or galvanic skin responses)

during the happy and sad slide stories. Furthermore, children's arousal in reaction to the positive affect of peers and their arousal in reaction to the negative affect of peers are highly correlated and are revealing a stronger unity in children's empathic arousal to different affects than was evident in verbal self-reports of empathy.

Finally, the correlations between arousal and children's self-reports of empathy are generally quite low. Apparently children do not often describe their arousal reactions to affect in peers as emotion that matches the affect of the observed peers. However, based on our informal observations of the children during testing, there appears to be a closer correspondence between physiological arousal and children's facial expressions of empathic emotion. These preliminary findings support our thinking that a multiple measure of emotional empathy is needed. When physiological and facial reactions to affect are combined with children's labeling of their feelings, the multiple measure may prove to be a more powerful predictor of their social behavior toward peers than any single index of emotional empathy.

Though we are making progress in measuring emotional empathy in children, the cumulative findings from the series of studies I have described today show that the relation between children's empathic emotion and their social behavior is complex. As we refine our measures we get increasingly stronger support for our general hypothesis that emotional empathy can serve as both an inhibitor of antisocial behavior and as a motivator of prosocial behavior. But, at the same time, we are uncovering a number of qualifications to these general trends--qualifications that point to the significance of developmental and situational determinants of how children react to the affect of others, and, of whether or not, and how, children's empathy is reflected in their social behavior.

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Figure, Tables, and Acknowledgements

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Figure 1

Descriptions of Feshbach and Roe (1968)
Slide Stories and Scoring Procedures

Slide Stories

Happy

Set 1 Story child has birthday party with presents and cake.

Set 2 Story child wins trip to Disneyland in contest.

Sad

Set 1 Story child loses dearly loved pet.

Set 2 Story child is not included in the "fun and games" of a play group.

Anger

Set 1 Story child has special toy taken from him/her by bully.

Set 2 A peer causes the story child to get falsely blamed for breaking a neighbor's window.

Fear

Set 1 Story child gets lost in woods.

Set 2 Story child is about to be bitten by a large dog.

Procedure: Following each story, the subject is asked, "How do you feel; tell me how you feel."

Scoring

Strict Method: 1 = exact "emotional match"

0 = other or no emotion

Liberal Method: 2 = exact "emotional match"

1 = close (e.g., "bad" for sad)

0 = no emotion or opposite (e.g., "fine following sad slides)

The empathy score for each child is the sum of the socres across all slide sets (possible range = 0 to 8 for strict scoring method and 0 to 16 for liberal scoring method).

Table 1

Empathy and Social Behavior

(..) Empathy and Aggression. Correlations between total empathy scores and duration of aggressive responses following exposure to violent and non-violent television for boys at two age levels (n's = 18 in each condition at each age level).

	T. V. Condition		
	Violence Plus Victims' Pain Cues	Violence Only	Non-Violent T. V.
Grade 1	-.35	-.24	.22
Grade 5	.20	-.11	-.37

None of the correlations reaches statistical significance.

(B) Empathy and Altruism. Correlations between total empathy scores and altruism scores for girls and boys at two age levels.

	Girls	Boys
Grade 1	.19 (n=30)	.28 (n=32)
Grade 3	-.26 (n=32)	-.16 (n=33)

None of the correlations reaches statistical significance.

Table 2

Internal Consistency of Verbal Self-Reports of Empathy in Children

	Study I (n=126)			Study II (n=108)		
Reliability						
(A) Inter-affect correlations	Sad	Anger	Fear	Sad	Anger	Fear
Happy	.27	.37	.28	.49	.29	.20
Sad		.29	.25		.40	.42
Anger			.34			.41
Fear						
(B) Affect Subscores to total empathy correlations						
Happy		.42			.43	
Sad		.37			.59	
Anger		.47			.48	
Fear		.41			.46	
(C) Chronbach Alpha		.64			.70	
Sample Characteristics						
Age:	Grades 1 and 3			Grades 1 and 5		
Sex:	Girls and Boys			Boys only		
Ethnicity:	Black, Anglo, & Mexican-American			Anglo		
Empathy Response:	Verbal Self-report			Verbal Self-report		

Table 3

(A) Empathy and Aggression

Correlations between empathy sub-scale scores (sad, fear, anger) and aggression scores for grade 1 and grade 5 boys in three television exposure conditions (n's=18).

		Grade and Television Condition		
		Violence & Pain Cues	Violence Only	Non-Violent T.V.
	Empathy Sub-scales			
Grade 1	Sad	-.41	-.47*	.31
	Fear	-.54*	-.33	.12
Grade 5	Sad	.15	-.17	-.47*
	Anger	.42	-.16	-.50*

* $p < .05$

(B) Empathy and Altruism

Correlations between empathy sub-scale scores for sad and altruism scores for grade 1 and grade 3 girls and boys.

	Girls	Boys	Boys & Girls combined
Grade 1	.25	.26	.25*
Grade 3	-.20	-.47**	-.35**

* $p < .05$

** $p < .01$

Table 4

Empathic Affect and Altruism

Correlations between the experimenters' subjective ratings of children's empathic affect (face & voice) and the children's altruism scores for grade 1 and grade 3 girls and boys.

	Affective Empathy Sub-Scales	Girls	Boys
		(n=18)	(n=24)
Grade 1	Happy	.53*	-.28
	Fear	-.02	.40*
		(n=24)	(n=24)
Grade 3	Happy	-.07	.03
	Fear	-.04	-.04

* $p < .05$

Table 5

Affective Arousal and Aggression

Correlations between facial expressions (pain and joy reactions to televised pain cues and violence) and duration of aggression scores for grade 1 and grade 5 boys in two television exposure conditions.

	Grade and Television Conditions			
	Grade 1		Grade 5	
Facial Affect while Viewing Pain Cues or High Violence	Violence & Pain Cues (n=13)	Violence Only (n=14)	Violence & Pain Cues (n=14)	Violence Only (n=11)
Pain expressions during				
Pain Cues (empathic affect)	.37	-	-.69**	-
High Violence	.67*	.06	-.32	.12
Joy expressions during				
Pain Cues	nc	-	nc	-
High Violence	-.23	.51[m]	-.14	.30

[m] $p = .06$ (this correlation was significant for both the frequency and intensity measures of aggression.)

* $p < .05$

** $p < .01$

nc = no cases of that affect in that segment of that T. V. exposure condition.

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